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| 10/533,190   | 04/28/2005  | Lucyna Pawlowska     | CH8070US            | 5375             |
| 23413 7590 01/21/2009<br>CANTOR COLBURN, LLP<br>20 Church Street<br>22nd Floor<br>Hartford, CT 06103 |             |                      |                     |                  |
| EXAMINER<br>CORDRAY, DENNIS R  |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
| 1791   |             |                      |                     |                  |
| NOTIFICATION DATE  |             | DELIVERY MODE        |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

### Office Action Summary

**Application No.**

10/533,190

**Applicant(s)**

PAWLOWSKA ET AL.

**Examiner**

DENNIS CORDRAY

**Art Unit**

1791

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13, 46 and 47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13, 46 and 47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/S5108)  
Paper No(s)/Mail Date 11/18/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

#### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/18/2008 has been entered.

#### ***Information Disclosure Statement***

2. The U.S. Patent document 4845663 to Han et al referenced in the information disclosure statement filed 11/18/2008 has not been considered as to the merits. U.S. Patent 4845663 was issued to Brown et al on 4 July, 1989 and is titled, "Image Processor With Free Flow Pipeline Bus." The patent appears to have no relevance to the instant Application.

Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

***Response to Arguments***

3. Applicant's amendments have overcome the following rejections:

Claims 1-13, 46 and 47 under 35 U.S.C. 112, 2<sup>nd</sup> paragraph.

Claims 1-3, 7, 9-12 and 46-47 under 35 U.S.C. 102(b) or under 35 U.S.C. 103(a) over Wasser. Wasser does not disclose a surfactant.

The provisional Obviousness-type Double Patenting rejection of Claims 1, 6-13, 46 and 47 over copending Application No. 10/533702 in view of Novak. The claimed surfactant and synthetic polymer are not claimed in the copending application.

The above rejections have therefore been withdrawn.

The outstanding rejections over prior art not indicated herein as being withdrawn are maintained but have been amended to correspond to the amendments. In addition, upon further consideration, new grounds of rejection are presented as detailed below.

4. Applicant's amendments and arguments filed 11/18/2008 have been fully considered but fail to overcome the remaining rejections over the cited prior art.

Applicant has amended the independent claims to make them product-by-process claims. Applicant argues that the cited prior art fails to disclose making the sizing composition by preparing components (a) and (b) separately.

The composition of Frolich is made by mixing water, a synthetic polymer stabilizer (claimed polymer of component (a)), a cationic compound (quatamary ammonium surfactant) and sizing agent, thus forming the component (a) as claimed (col 6, lines 43-48). The dispersion can be mixed with a retention aid, such as a cationic

starch or cationic acrylamide-based polymer (col 9, lines 18-26), thus forming the claimed composition.

Novak does not teach combining the ingredients by the method claimed, but forms a composition substantially identical to that claimed, but by a different process.

It has been long established by the court that the process of obtaining the product is immaterial or irrelevant to the patentability of a *product*. See for example, In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985) "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process."

The claimed aqueous sizing composition is an emulsion comprising alkenylsuccinic anhydride (ASA) or alkylene ketene dimer (AKD) particles suspended in an aqueous solution comprising water, vinyl addition or condensation polymers having anionic, non-ionic or amphoteric charge, a surfactant selected from a group of recited species, and a second component that can be cationic starch, non-ionic starch, anionic starch, water-soluble polymer, water or mixtures thereof. In the combined composition, the ASA or AKD, surfactant and polymers form one composition or emulsion. The products of the cited prior art are compositions that overlay the claimed product, although made by a different process. Absent a showing of unexpected results attributable to the method of forming the composition, the compositions of the prior art

are substantially identical to the claimed composition, thus anticipate or, at least, make obvious the claimed composition.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6, 7, 9-11 and 46-47 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Frolich et al (5969011).

Claims 1, 2, 46 and 47: Frolich et al discloses an aqueous dispersion of cellulose-reactive sizing agent that can be an alkylene ketene dimer (AKD) or ASA and a dispersant system comprising a cationic organic compound and an anionic stabilizer

(Abs; col 2, lines 24-60; col 3, lines 3-5). In some embodiments, the cationic organic compound can be a quaternary ammonium surfactant (quaternary salt of a tertiary amine), which overlays the claimed surfactant species (col 3, line 17 to col 4, line 4). The anionic stabilizer can be a condensation or vinyl addition polymer made from monomers having anionic groups. The anionic stabilizer can also have cationic groups, thus can be amphoteric (col 4, line 60 to col 5, line 20). Frolich et al discloses that the anionic stabilizer has a degree of anionic substitution from 0.1 to 1.4, which overlays the claimed charge substitution range.

Thus, in one embodiment, the dispersion comprises ASA particles suspended in a polymer solution comprising a cationic ammonium surfactant and a water soluble anionic or amphoteric condensation or vinyl addition polymer (corresponds to the polymer of component (a)). In this case, water is the second component.

Alternatively, in a preferred embodiment, the dispersion can be mixed with a retention aid, such as a cationic starch or cationic acrylamide-based polymer (water soluble polymer) (col 9, lines 18-26). In this embodiment, the ASA or AKD is in a dispersion comprising an anionic or amphoteric condensation or vinyl addition polymer, a cationic surfactant, and the retention aid corresponds to the second component.

Examples are disclosed of improved sizing properties imparted to paper (a fibrous substrate) (cols 11-13; Examples 4-9), thus the ASA or AKD component is sufficiently dilute to provide useful sizing properties. Suitable temperatures for making AKD sizing dispersions are from 55 to 95 °C, while lower temperatures can be used for

acid anhydrides (col 6, lines 43-50), thus in some embodiments the emulsion can have the claimed temperatures.

Claims 1, 46 and 47 are product-by-process claims. The product of Frolich et al appears to be the same as or similar to the claimed product, a sizing composition comprising the claimed sizing agent, surfactant, polymers and starches, although produced by a different process. The burden therefore shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). "In the event any differences can be shown for the product of the product-by-process claims 1, 46 and 47 as opposed to the product taught by the reference Frolich et al, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results: see also In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)"

Claims 3, 4 and 6: The sizing agent is present in the dispersions in an amount from 0.1 to 50% by weight (col 6, lines 32-34). The cationic component is present in an amount up to 100% by weight based on the amount of sizing agent, usually from 0.1 to 20% by weight and preferably from 2 to 7% by weight (col 6, lines 1-13). The anionic stabilizer in an amount up to 100% by weight based on the amount of sizing agent, usually from 0.1 to 20% by weight and preferably from 0.3 to 6% by weight (col 6, lines



13-16). The disclosed composition significantly overlays the claimed composition and ASA:polymer ratio.

Claim 7: The sizing agents have a particle size from 0.1 to 3.5 microns in diameter (col 6, lines 50-53).

Claims 9-11: The claimed sizing properties are not explicitly disclosed. In some embodiments, the disclosed sizing composition is substantially identical to the claimed composition thus will provide the claimed sizing properties and stability at temperatures from 40 to 185 °F or, at least, obtaining the sizing properties and stability would have been obvious to one of ordinary skill in the art at the time of the invention. Where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

6. Claims 1-6, 9-11 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Novak (4606773).

Claims 1, 2, 5, 46 and 47: Novak discloses an aqueous emulsion of ASA sizing agent comprising a water-soluble cationic vinyl addition or condensation polymer, a cationic starch and a surfactant. In some embodiments, the polymers also comprise anionically charged monomers, thus are amphoteric. Preferably at least 15 and up to

95 weight percent of the mer units have cationic charges, which overlays the claimed range (Abs; col 2, lines 21-29 and 51-54; col 3, line 20 to col 4, line 1; col 4, lines 14-22). Suitable surfactants include ethoxylated nonyl phenols (ethoxylated fatty alcohols), polyethylene glycols, PEG 400 mono-oleate (ethoxylated fatty ester) and others (col 3, lines 7-13). The disclosed compositions comprise an emulsion of ASA suspended in an aqueous amphoteric polymer solution that also comprises a cationic starch and a surfactant.

Novak discloses an accelerated aging test at 150 °F, thus the composition is heated (col 6, Example 4, lines 38-40).

Claims 1 and 46 are product-by-process claims. The product of Novak appears to be the same as or similar to the claimed product, a sizing composition comprising the claimed sizing agent, surfactant, polymers and starches, although produced by a different process. The burden therefore shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). "In the event any differences can be shown for the product of the product-by-process claims 1, 46 and 47 as opposed to the product taught by the reference Novak, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results: see also In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)"

Claims 3, 4 and 6: In a preferred embodiment, the ASA is present in an amount of 75-99.5 parts by weight and the surfactant in an amount from 0.5 to 25 parts (col 2, lines 59-64). The disclosed amount of surfactant overlaps the claimed composition. The ASA emulsions generally contain 40-99.9 wt-% water, 0.01-50 wt% ASA, 0.001-25 wt% water-soluble polymer and 0.001-25 wt% cationic starch (col 4, lines 60-66). The disclosed compositions significantly overlay the claimed composition.

Claims 9-11: The claimed sizing properties are not explicitly disclosed. In some embodiments, the disclosed sizing composition is substantially identical to the claimed composition thus, for reasons previously given, will provide the claimed sizing properties and stability at temperatures from 40 to 185 °F or, at least, obtaining the sizing properties and stability would have been obvious to one of ordinary skill in the art at the time of the invention.

7. Claims 1-7, 9-11 and 46-47 are rejected under 35 U.S.C. 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Dilts et al (6576049).

Claims 1-6, 46 and 47: Dilts et al discloses a sizing composition comprising an aqueous emulsion comprising from about 0.1 wt% to about 50 wt-% ASA or AKD, at least one emulsion stabilizer, from about 0.1 wt-% to about 5 wt-% of a surfactant and from about 0.1 wt-% to about 15 wt-% based on the sizing agent of one or a mixture of hydrophobic substances. The hydrophobic substance can comprise fatty acid esters, fatty alcohols, fatty acids, etc, which read on the claimed surfactants (Abs; col 2, line 54

to col 3, line 1; col 3, lines 40-46; col 5, lines 9-60; col 6, lines 1-22; col 9, lines 48-50; col 10, lines 46-48; col 14, lines 46-48; col 15, lines 33-35; col 17, lines 8-11). The surfactant can be ethoxylated nonyl phenol, polyethylene glycols, polyoxyalkylene alkyl esters, polyoxyalkylene alkylaryl esters (ethoxylated fatty esters), tertiary amines and their quaternary salts, etc (col 14, lines 46-67; col 15, lines 1-8). The emulsion stabilizer is present in an amount from about 9 wt-% to about 400 wt-% based on the sizing agent and can be a cationic, nonionic or anionic vinyl addition polymer (including water soluble polymers), cationic starch or synthetic amphoteric polymer (col 15, line 40 to col 16, line 29). Cationic polymers can be copolymers comprising non-ionic monomers such as acrylamide. Preferred stabilizers comprise a cationic synthetic polymer, a cationic starch or mixtures thereof thus, in some embodiments, the composition comprises a cationic synthetic polymer and a cationic starch (col 16, lines 14-18). The non-ionic stabilizers and copolymers with acrylamide read on the claimed charge substitution of "from 0 to about 90%" or, at least, the claimed charge substitution would have been obvious to one of ordinary skill in the art.

In an example, an ASA and lanolin emulsion is heated to a temperature of 75-80 °C during its preparation, cooled to room temperature and mixed with additional ASA solution and added to a cationic starch solution to form the sizing composition (cols 22 and 23, Example 1). No further cooling of the compositions to below 4 °C is disclosed thus the sizing composition is made at room temperature or, at least, such would have been obvious to one of ordinary skill in the art.

The disclosed composition significantly overlays the claimed composition.

The sizing promotion efficiency is greater than or equal to about 6, thus the sizing component is sufficiently diluted to impart useful sizing properties to a fibrous substrate (col 3, lines 1-4).

Claims 1, 46 and 47 are product-by-process claims. The product of Dilts et al appears to be the same as or similar to the claimed product, a sizing composition comprising the claimed sizing agent, surfactant, polymers and starches, although produced by a different process. The burden therefore shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. In re Marosi, 710 F.2d 798, 802, 218 USPQ 289, 292 (Fed. Cir.1983). "In the event any differences can be shown for the product of the product-by-process claims 1, 46 and 47 as opposed to the product taught by the reference Dilts et al, such differences would have been obvious to one of ordinary skill in the art as a routine modification of the product in the absence of a showing of unexpected results: see also In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)"

Claim 7: Dilts et al discloses a median particle sizes of 5  $\mu\text{m}$  or less (col 15, lines 24-31; Claims 13 and 14).

Claims 9-11: The claimed sizing properties are not explicitly disclosed. In some embodiments, the disclosed sizing composition is substantially identical to the claimed composition thus, for reasons previously given, will provide the claimed sizing properties

and stability at temperatures from 40 to 185 °F or, at least, obtaining the sizing properties and stability would have been obvious to one of ordinary skill in the art at the time of the invention.

8. Claims 7 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Novak in view of Frolich et al or Dilts et al.

Novak is used as above. Novak does not disclose the particle size of the ASA. Novak does not disclose AKD.

Frolich et al and Dilts et al are used as above.

The art of Novak, Frolich et al, Dilts et al, and the instant invention is analogous as pertaining to sizing compositions using cellulose reactive sizes. The compositions of Novak, Frolich et al and Dilts et al are substantially identical in many embodiments, thus it would have been obvious to one of ordinary skill in the art to obtain the claimed particle size. It would further have been obvious to use AKD in the sizing composition of Novak in view of Frolich et al or Dilts et al as a well known cellulose reactive sizing agent that is used with or in place of ASA in sizing compositions with a reasonable expectation of achieving useful sizing properties.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frolich et al, Novak or Dilts et al as evidenced by Chunyu ("Alkenyl Succinic Anhydrides (ASA): a Neutral Sizing Agent").

Frolich et al, Novak and Dilts et al are used as above. Frolich et al, Novak and Dilts et al do not disclose hydrolyzed ASA.

It is well known that ASA is very reactive and will readily hydrolyze in the presence of water (see Chunyu, p 3, Figure 4 and paragraph immediately below the figure). It would have been obvious to one of ordinary skill in the art to obtain an amount of hydrolyzed ASA within the claimed range due to the large amount of water present in the sizing compositions.

10. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frolich et al, Novak or Dilts et al.

Frolich et al, Novak and Dilts et al are used as above. Frolich et al, Novak and Dilts et al do not disclose whether the particle size distribution in the sizing compositions is monomodal or multimodal.

However, compositions having a broad range of particle sizes from 0.1 to 3.5 microns are disclosed by the references. No evidence of surprising results is given or discussed in the instant Specification for using a multimodal particle distribution over a monomodal distribution and no comparison is made with the nearest prior art cited herein. Absent any evidence of surprising properties of the solutions of the instant invention over the disclosure of Frolich et al or Novak, it would have been obvious to one of ordinary skill in the art to use any of particle distribution, monomodal or multimodal for the sizing composition of Frolich et al, Novak and Dilts et al as functionally equivalent options.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

11. Claims 1-2, 4-11, 46 and 47 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12, 44 and 45 of copending Application No. 10/534202. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the copending application are generic to the instant Claims. The copending application recites aqueous sizing compositions comprising emulsions having the same cellulose reactive sizes and surfactant (a), and the claimed starch component, polymers or mixture thereof (b). The copending embodies an emulsion containing starch and a polymer, thus are generic to the instant claims. The sizing compositions have the same or overlapping features and sizing effects on fibrous substrates.



This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

12. Claims 1-7, 9-11, 46 and 47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-7, 10-16 and 18 of U.S. Patent No. 6576049. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the patent embody compositions overlaying the claimed compositions. The sizing effects on paper would have been obvious to one of ordinary skill in the art for reasons given above. The method of making the sizing compositions is immaterial or irrelevant to the patentability of a product for reasons discussed above.

13. Claims 1-7, 9-11, 46 and 47 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3, 5, 6 and 7 of U.S. Patent No. 6666952 in view of Novak. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the patent embody the use of compositions overlaying the claimed compositions.

The claims of the patent do not specify the species of emulsion stabilizer or the amounts of sizing agent and emulsion stabilizer in the compositions. However, Novak discloses similar sizing emulsions and one of ordinary skill in the art would have found it obvious to use the claimed the emulsion stabilizers (starches, synthetic polymers and mixtures thereof) in the sizing emulsions and would also have found it obvious to use

the claimed amounts of sizing agent and emulsion stabilizers from the disclosure of Novak. The sizing effects on paper would have been obvious to one of ordinary skill in the art for reasons given above. The method of making the sizing compositions is immaterial or irrelevant to the patentability of a product for reasons discussed above.

### ***Conclusion***

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DENNIS CORDRAY whose telephone number is (571)272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/533,190  
Art Unit: 1791

Page 18

/Dennis Cordray/  
Examiner, Art Unit 1791

/Eric Hug/  
Primary Examiner, Art Unit 1791